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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/875,033 | 06/07/2001 | Eliezer Fogel | P-3443-US | 6051 |
| 27130 | 7590 | 06/24/2005 | EXAMINER | |
| EITAN, PEARL, LATZER & COHEN ZEDEK LLP 10 ROCKEFELLER PLAZA, SUITE 1001 NEW YORK, NY 10020 | | | WILSON, ROBERT W | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2661 | |

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,033

Applicant(s)

FOGEL, ELIEZER

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

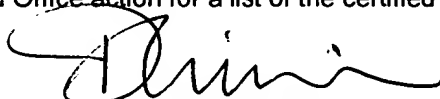
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/7/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



PHIRIN SAM
PRIMARY EXAMINER

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koorapaty (U.S. Patent No.: 6,631,124 B1).

Referring to claim 1, Koorapaty teaches: A wireless communication system per col. 5 line 29 or cellular communication system. A terminal or user may be assigned to a single time slot defined by a CDMA spreading code per col. 2 line 60-col. 4 line 54 or col. 6 lines 18-67.

Koorapaty does not expressly call for: transmission by the user but teaches multiple time slots received from terminal or users at a base station or repeater per Figs 5A or 5B.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the terminal or user would be able to transmit the spreading code in a single time slot in order for the base station or repeater to receive the multiple time slots as shown in Figs 5A and 5B.

In addition Koorapaty teaches:

Regarding claim 2, entire time slot may be allocated to a terminal or user and single terminal may be assigned multiple spreading codes per Figs 5A-5B or col. 6 lines 18-43.

Regarding claim 3, the applicant broadly claims "dynamic range". The examiner interprets that the resource allocator can assign spreading codes per col. 5 line 26-col. 6 line 44 or dynamic range.

Referring to claim 5, Koorapaty teaches: A wireless communication system per col. 5 line 29 or cellular communication system. Figures 5A & 5B shows a timeslot with a subchannel which is assigned to multiple users.

Koorapaty does not expressly call for: timeslot allotted to one of a multiplicity of users wherein the time slot is transmitted but teaches a timeslot with a subchannel which is assigned to multiple users per figs 5A & 5B.

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It would have been obvious to one of ordinary skill in the art at the time of the invention that if the system could assign a subchannel within a timeslot to multiple users that it would be able to assign each terminal or user a subchannel based upon spreading code based upon the performance requires and signal reception conditions in order to provide optimum conditions for the system.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S.

Patent No.: 6,215,777 B1)

Referring to claim 11, Chen teaches: A receiver shown on Figs 2A & 2B.

The down converter is element 104 per Fig 2A downshifts the signal to a lower frequency.

The elements 120A,...120N per Fig 2B reconstruct the signal based by despreading with A to N spreading codes (reconstructors)

The COMBINER (127 per Fig 2B) or multiplexer demodulates the segments in to a received signal.

Chen does not expressly call for: downshift to baseband but teaches downshift.

It would have been obvious to one of ordinary skill in the art at the time of the invention that downshifting the signal is equivalent to downshifting to baseband.

4. Claims 4 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koorapaty (U.S. Patent No.: 6,631,124 B1) in view of Ovesjo (U.S. patent No.: 6,108,369).

Referring to claim 4, Koorapaty teaches: the method according to claim 1.

Koorapaty does not expressly call for: comprising having a predetermined spreading factor and spreading the data of said user to be transmitted during said time slot with a spreading factor less than said predetermined spreading factor.

Ovesjo teaches: transmission in which the spreading factor is varied to a predetermined minimum which results in limiting the data rate. It would have been obvious to one of ordinary skill in the art at the time of the invention that transmission up to a maximum predefined spreading factor is the inverse of transmission above a minimum predefined spreading factor and that the inverse function can also be utilized to optimize the performance based upon a different criteria.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add transmit varying the spreading factor so that the spreading factor is less than a predetermined

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spreading factor to the transmission of Ovesjo to the transmission of Koorapaty in order to achieve optimum performance

Referring to claim 6, Koorapaty teaches: the method according to claim 5.

Koorapaty does not expressly call for: comprising having a predetermined spreading factor and spreading the data of said user to be transmitted during said time slot with a spreading factor less than said predetermined spreading factor.

Ovesjo teaches: transmission in which the spreading factor is varied to a predetermined minimum which results in limiting the data rate. It would have been obvious to one of ordinary skill in the art at the time of the invention that transmission up to a maximum predefined spreading factor is the inverse of transmission above a minimum predefined spreading factor and that the inverse function can also be utilized to optimize the performance based upon a different criteria.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add transmit varying the spreading factor so that the spreading factor is less than a predetermined spreading factor of Obsevjo to the transmission of Koorapaty in order to achieve optimum performance

5. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Gitlin (U.S. Patent No.: 5,442,625) in view of Ovesjo (U.S. patent No.; 6,108,369)

Referring to claim 8, Gitlin teaches Transmitter according to claim 7

Gitlin does not expressly call for: comprising having a predetermined spreading factor and spreading the data of said user to be transmitted during said time slot with a spreading factor less than said predetermined spreading factor.

Ovesjo teaches: transmission in which the spreading factor is varied to a predetermined minimum which results in limiting the data rate. It would have been obvious to one of ordinary skill in the art at the time of the invention that transmission up to a maximum predefined spreading factor is the inverse of transmission above a minimum predefined spreading factor and that the inverse function can also be utilized to optimize the performance based upon a different criteria.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add transmit varying the spreading factor so that the spreading factor is less than a predetermined spreading factor in order to achieve optimum performance and the expected result would be the inverse of the function performed by Ovesjo to the transmitter of Gitlin in order to optimize system transmission

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 7 & 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Gitlin (U.S. Patent No.: 5,442,625).

Referring to claim 7, Gitlin teaches Transmitter (250 per Fig 2) with S/P (281 per Fig 20 or demultiplexer which creates M channels per Fig 2 (plurality n set) with M Walsh modulators (N spreaders) with M spreading codes (C1, ..., CM) or N spreading codes which creates M modulated segments or N modulated segments. The Adder (254 per Fig 20 is the summer.

Referring to claim 9, Gitlin teaches Transmitter (250 per Fig 2) with S/P (281 per Fig 20 or demultiplexer which creates M channels per Fig 2 (plurality n set) with M Walsh modulators (N spreaders) with M spreading codes (C1, ..., CM) or N spreading codes which creates M modulated segments or N modulated segments. The Adder (254 per Fig 2) is the summer. The modulator (208 & 209 per Fig 2) is the upconverter.

8. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Fattouche (U.S. Patent No.: 5,555,268).

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Referring to claim 10, Fattouche teaches: A receiver per Fig 2 with a plurality of K elements (26 per Fig 2) which utilizes K spreading codes to produce K demodulated segments.

Parallel to serial conversion per Fig 2 performs the demultiplexing.

Drawings

9. The drawings are objected to because they are not of sufficient quality to be published in a patent also elemental numbers as well as elements are described in the specification but not shown in the drawings:

For example:

Referring to Figure 1, Pg 5 lines 15-23 the specification describes time slot 10 as well as time period T neither are shown in the Figure. Elemental numbers also need to have names.

Referring to Figure 2, element number 12 is described in the specification on Pg 6 lines 1-7 which is also not shown on Figure 2. Elemental numbers also need to have names.

Referring to Figure 3, Elemental numbers need names.

Referring to Figure 4, Time period T described on Pg 9 lines 5-10 but is not shown in figure 4. SF/N is shown in Figure 4 but not described in the specification?

10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 3-4, 6, 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claim 3, the specification defines spreading factor between $-N$ to N and states the amplifier will be required to have a larger dynamic range per Pg 7 lines 5-10. The applicant has interpreted that $-N$ to N spreading factor is dynamic range but this has a different meaning that dynamic range associated with a power amplifier which is described in the specification consequently the applicant has created a limitation which does not have adequate written description in the specification.

Referring to claims 4, 6, & 8, the specification teaches that by transmitting using a spreading factor which is lower than a standard per Pg 9 lines 5-10. The applicant has claimed "transmitting with a spreading factor which is less than a predetermined value". The specification does not define a predetermined value is defines a standard value. A standard value and predetermined value have different meanings; consequently, the applicant has created a limitation which does not have adequate written description.

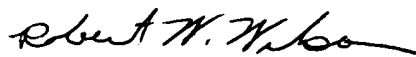
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Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
6/17/05



**PHIRIN SAM
PRIMARY EXAMINER**